

UNITED STATES DEPARTMENT OF COMMERCE NEWS

WASHINGTON, DC 20230

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AND
STATISTICS
ADMINISTRATION

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FOR RELEASE 10:00 AM EST, THURSDAY, NOVEMBER 1, 2001

CB01-172

SEPTEMBER 2001 CONSTRUCTION AT \$843.1 BILLION ANNUAL RATE

Construction put in place during September 2001 was estimated at a seasonally adjusted annual rate of \$843.1 billion, nearly the same (± 5 percent) as the revised August estimate of \$846.1 billion, according to the U.S. Commerce Department's Census Bureau. The September figure represents a 3 (± 5) percent increase over September 2000.

During the first 9 months of this year \$642.6 billion of construction was put in place, 6 percent above the \$606.5 billion for the same period in 2000.

In constant (1996) dollars, the September annual rate was \$706.6 billion, nearly the same (± 5 percent) as the revised estimate of \$709.7 billion for August.

PRIVATE CONSTRUCTION

Spending on new residential housing units was at a seasonally adjusted annual rate of \$278.3 billion in September, 1 (± 2) percent below the revised August estimate of \$280.0 billion. Nonresidential building construction was at a rate of \$195.2 billion, nearly the same (± 3 percent) as the revised August estimate of \$195.9 billion.

PUBLIC CONSTRUCTION

In September, the estimated seasonally adjusted annual rate of public construction put in place was \$202.1 billion, 1 (± 5) percent above the revised August estimate of \$199.7 billion.

October 2001 data will be released on December 3, 2001 at 10:00 AM EST.

EXPLANATORY NOTES

In interpreting changes in the statistics in this release, note that month-to-month changes in seasonally adjusted statistics often show movements which may be irregular. It may take 2 months to establish an underlying trend for total construction and as long as 8 months for specific categories of construction.

The statistics in this release are estimated from several sources and surveys and are subject to sampling variability as well as nonsampling errors including bias and variance from response, nonreporting, and undercoverage. Estimates of the standard errors are provided in Table 4 for selected types of construction. Whenever a statement such as "2 (± 3) percent above" appears in the text, this indicates the range (-1 to +5 percent) in which the actual percent change is likely to have occurred. All ranges given are 90 percent confidence intervals. If the range contains zero, it is uncertain whether there was an increase or decrease; that is, the change was not statistically significant. For any comparison cited without a confidence interval, the change is statistically significant. Statistics for the current month are preliminary estimates subject to revision in following months as additional data become available. The average absolute percent changes from preliminary estimate to first revision for the major seasonally adjusted components are as follows: total construction, 0.5 percent; private construction, 0.6 percent; private residential construction, 0.5 percent; private nonresidential construction, 1.1 percent; and public construction, 1.4 percent.

More detailed data will appear in Current Construction Reports, C3001-9, to be issued later this month. A discussion of sources and reliability of the data appears in Current Construction Reports, C3001-5.

This press release is available on the date of issue through:

1. The internet at http://www.census.gov/construction/c30_curr.html
2. The Commerce Department's on-line Economic Bulletin Board (EBB) and STAT-USA/Fax services. For more information, telephone (202) 482-1986.

Table 1. Value of Construction Put in Place in the United States, Seasonally Adjusted Annual Rate

[Billions of dollars. Detail may not add to total due to rounding. Percent changes based on unrounded figures]

Type of construction	Sep ^P 2001	Aug ^r 2001	Jul ^r 2001	Jun 2001	May 2001	Apr 2001	Mar 2001	Sep 2000	Percent change Sep 2001 from—	
									Aug 2001	Sep 2000
	Current dollars									
Total construction.....	843.1	846.1	856.7	861.6	869.6	870.8	869.1	815.4	(Z)	3
Private construction ¹	641.0	646.4	661.1	665.3	670.8	677.4	681.2	638.9	- 1	(Z)
Residential buildings ²	385.4	389.9	390.5	391.5	394.3	392.2	395.1	364.4	- 1	6
New housing units.....	278.3	280.0	280.0	278.5	278.8	274.7	273.9	257.4	- 1	8
1 unit.....	247.3	248.7	248.2	247.5	246.8	244.8	244.4	230.7	- 1	7
2 units or more.....	31.0	31.3	31.8	31.0	32.0	29.9	29.5	26.7	- 1	16
Nonresidential buildings.....	195.2	195.9	210.7	210.8	211.7	220.6	225.9	214.0	(Z)	- 9
Industrial.....	31.0	31.6	34.6	33.0	31.9	34.7	34.8	31.4	- 2	- 1
Office.....	50.5	49.1	53.6	55.0	55.0	58.8	61.8	59.4	3	- 15
Hotels, motels.....	13.9	13.9	14.9	15.0	14.5	14.9	15.1	16.3	(Z)	- 15
Other commercial.....	55.6	56.9	62.2	61.9	63.6	66.1	67.0	62.0	- 2	- 10
Religious.....	8.3	8.6	8.9	8.7	8.4	8.4	8.1	8.1	- 4	3
Educational.....	13.2	12.2	11.6	11.6	12.2	12.4	12.4	11.5	8	15
Hospital and institutional.....	14.1	14.5	15.4	15.7	16.0	15.3	15.9	15.1	- 3	- 6
Miscellaneous buildings.....	8.7	9.0	9.6	10.0	10.0	10.0	10.7	10.4	- 3	- 16
Telecommunications.....	(NA)	22.6	22.0	22.4	24.4	22.8	21.7	21.1	(NA)	(NA)
All other private.....	2.6	2.6	2.6	2.5	2.6	2.7	2.5	3.3	(Z)	- 20
Public construction.....	202.1	199.7	195.5	196.2	198.7	193.4	188.0	176.6	1	14
Housing and redevelopment.....	6.5	6.8	6.1	6.5	6.5	6.2	5.4	5.3	- 4	24
Industrial.....	1.4	1.4	1.5	1.4	1.3	1.6	1.4	1.1	(Z)	28
Educational.....	56.3	53.5	50.3	46.8	50.0	47.8	45.9	43.8	5	29
Hospital.....	4.5	4.3	3.9	3.9	3.8	3.8	4.0	4.0	5	11
Other public buildings.....	33.8	33.4	31.9	32.5	32.7	32.2	30.9	28.1	1	20
Highways and streets.....	55.2	56.1	60.3	61.5	60.4	57.7	57.4	53.9	- 2	2
Military facilities.....	2.4	2.6	2.4	2.5	2.3	2.5	2.1	2.5	- 7	- 6
Conservation and development ..	7.3	7.1	6.1	6.6	7.2	6.3	7.6	6.4	4	14
Sewer systems.....	10.7	10.3	9.9	10.4	10.3	11.0	10.1	9.6	3	11
Water supply facilities.....	8.8	8.6	8.0	8.5	7.7	8.7	7.9	7.2	2	22
Miscellaneous public.....	15.3	15.6	15.1	15.7	16.4	15.6	15.3	14.7	- 2	4
	1996 dollars									
Total construction.....	706.6	709.7	720.5	724.2	733.5	736.0	733.1	703.3	(Z)	(Z)
Private construction ¹	536.7	541.6	555.8	559.2	565.2	572.0	574.3	551.0	- 1	- 3
Residential buildings ²	320.9	324.9	327.0	328.2	330.0	329.0	331.4	313.6	- 1	2
New housing units.....	231.7	233.4	234.5	233.5	233.3	230.5	229.8	221.5	- 1	5
1 unit.....	205.9	207.3	207.9	207.5	206.5	205.4	205.0	198.5	- 1	4
2 units or more.....	25.8	26.1	26.7	26.0	26.8	25.1	24.7	23.0	- 1	12
Nonresidential buildings.....	162.0	162.7	175.3	174.9	176.6	184.3	188.2	181.8	(Z)	- 11
Industrial.....	25.7	26.3	28.8	27.4	26.6	29.0	29.0	26.7	- 2	- 4
Office.....	41.9	40.7	44.6	45.6	45.9	49.2	51.5	50.5	3	- 17
Hotels, motels.....	11.5	11.6	12.4	12.4	12.1	12.4	12.6	13.8	- 1	- 17
Other commercial.....	46.1	47.3	51.7	51.3	53.0	55.2	55.8	52.7	- 3	- 12
Religious.....	6.9	7.2	7.4	7.3	7.0	7.0	6.7	6.9	- 4	(Z)
Educational.....	11.0	10.2	9.6	9.6	10.2	10.4	10.3	9.7	8	12
Hospital and institutional.....	11.7	12.1	12.8	13.0	13.4	12.8	13.3	12.8	- 3	- 9
Miscellaneous buildings.....	7.2	7.4	8.0	8.3	8.4	8.3	8.9	8.9	- 3	- 18
Telecommunications.....	(NA)	21.1	20.6	20.9	23.1	21.7	20.6	20.5	(NA)	(NA)
All other private.....	2.3	2.3	2.2	2.2	2.3	2.4	2.2	2.9	(Z)	- 22
Public construction.....	169.9	168.1	164.7	165.0	168.4	164.0	158.8	152.2	1	12
Housing and redevelopment.....	5.4	5.7	5.1	5.4	5.5	5.2	4.5	4.5	- 4	20
Industrial.....	1.2	1.2	1.2	1.2	1.1	1.3	1.1	0.9	(Z)	25
Educational.....	46.7	44.4	41.8	38.8	41.7	39.9	38.3	37.2	5	26
Hospital.....	3.7	3.5	3.2	3.3	3.2	3.2	3.3	3.4	5	8
Other public buildings.....	28.1	27.8	26.5	27.0	27.3	26.9	25.8	23.8	1	18
Highways and streets.....	46.2	47.1	50.6	51.4	51.0	48.7	48.0	46.5	- 2	- 1
Military facilities.....	2.0	2.1	2.0	2.1	1.9	2.1	1.8	2.1	- 8	- 8
Conservation and development ..	6.5	6.3	5.4	5.8	6.5	5.7	6.8	5.8	4	13
Sewer systems.....	9.5	9.2	8.8	9.2	9.2	9.9	9.1	8.7	3	10
Water supply facilities.....	7.4	7.3	6.8	7.2	6.7	7.5	6.9	6.3	2	19
Miscellaneous public.....	13.2	13.5	13.1	13.5	14.3	13.6	13.2	12.9	- 2	2

NA Not available. ^PPreliminary. ^rRevised. Z Less than 0.5 percent.

¹Includes the following categories of private construction not shown separately: residential improvements, railroads, electric light and power, gas, petroleum pipelines, and farm nonresidential.

²Includes improvements.

Table 2. Value of Construction Put in Place in the United States, Not Seasonally Adjusted in Current Dollars

[Billions of dollars. Detail may not add to total due to rounding. Percent changes based on unrounded figures]

Type of construction	Sep ^P 2001	Aug ^r 2001	Jul ^r 2001	Jun 2001	May 2001	Apr 2001	Mar 2001	Sep 2000	Year to date		
									Sep 2001	Sep 2000	Percent change
Total construction	79.2	81.0	78.6	78.2	75.3	69.3	64.9	77.0	642.6	606.5	6
Private construction ¹	59.0	60.2	59.8	59.9	58.4	54.5	52.1	59.0	496.6	475.6	4
Residential buildings ²	36.2	37.0	36.6	36.6	35.0	31.1	29.5	34.3	292.8	280.3	4
New housing units	25.7	26.3	26.0	25.2	24.0	22.2	21.0	23.8	207.1	199.3	4
1 unit	23.0	23.5	23.3	22.5	21.2	19.7	18.7	21.5	184.1	178.2	3
2 units or more	2.7	2.8	2.8	2.8	2.8	2.5	2.4	2.3	23.0	21.1	9
Nonresidential buildings	17.2	17.4	18.2	18.2	18.0	18.0	17.8	19.1	158.0	155.0	2
Industrial	2.7	2.7	2.9	2.8	2.7	2.8	2.7	2.8	24.6	23.6	4
Office	4.3	4.2	4.5	4.7	4.8	4.9	5.0	5.2	41.7	40.4	3
Hotels, motels	1.2	1.2	1.3	1.3	1.2	1.2	1.3	1.4	11.2	12.4	- 10
Other commercial	5.2	5.3	5.5	5.4	5.4	5.3	5.1	5.8	46.3	45.6	1
Religious	0.8	0.8	0.7	0.7	0.7	0.7	0.6	0.7	6.2	6.0	3
Educational	1.2	1.2	1.1	1.1	1.1	1.0	0.9	1.0	9.3	8.5	10
Hospital and institutional	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3	11.5	10.6	8
Miscellaneous buildings	0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.9	7.3	8.0	- 8
Telecommunications	(NA)	2.1	1.8	1.9	2.1	1.8	1.8	1.8	(NA)	12.6	(NA)
All other private	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	1.9	2.1	- 7
Public construction	20.3	20.8	18.8	18.3	16.9	14.9	12.8	18.0	146.0	130.9	12
Housing and redevelopment	0.6	0.6	0.5	0.6	0.6	0.5	0.4	0.5	4.6	3.8	20
Industrial	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.1	0.9	24
Educational	5.4	5.7	5.0	4.3	4.0	3.6	3.2	4.2	37.6	32.8	14
Hospital	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.4	3.0	3.0	- 2
Other public buildings	3.1	3.0	2.7	2.8	2.8	2.7	2.4	2.6	23.9	20.8	15
Highways and streets	6.1	6.8	6.4	6.2	5.4	4.2	3.2	6.2	43.4	39.6	10
Military facilities	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	1.8	1.8	(Z)
Conservation and development ..	0.9	0.7	0.5	0.6	0.6	0.5	0.6	0.8	5.4	4.5	19
Sewer systems	1.0	1.0	0.9	0.9	0.9	0.9	0.7	0.9	7.6	7.8	- 1
Water supply facilities	0.8	0.8	0.7	0.7	0.7	0.7	0.6	0.7	6.0	5.1	18
Miscellaneous public	1.6	1.6	1.4	1.4	1.4	1.2	1.1	1.5	11.7	10.7	9

NA Not available. ^PPreliminary. ^rRevised. Z Less than 0.5 percent.

¹Includes the following categories of private construction not shown separately: residential improvements, railroads, electric light and power, gas, petroleum pipelines, and farm nonresidential. ²Includes improvements.

Table 3. U.S. Census Bureau Composite Fixed-Weighted (1996 Weights) Price Index and Implicit Price Deflator

[1996 = 100]

Period	Fixed-Weighted Index			Implicit Price Deflator		
	1999	2000	2001	1999	2000	2001
January	108.4	113.9	117.8	108.5	114.0	117.4
February	108.6	114.1	118.3	108.6	114.1	117.7
March	109.0	114.0	118.8	109.0	113.9	118.5
April	109.3	114.5	118.7	109.3	114.4	118.3
May	109.7	114.8	118.9	109.8	114.8	118.6
June	110.4	115.0	119.2	110.3	115.1	119.0
July	110.6	115.6	^r 119.2	110.5	115.7	^r 118.9
August	110.8	115.7	^r 119.5	110.8	115.8	^r 119.2
September	110.9	116.1	^P 119.5	110.8	115.9	^P 119.3
October	111.4	116.4		111.3	116.3	
November	112.0	116.7		111.8	116.6	
December	112.3	117.1		112.1	116.9	
Annual	110.3	115.3		110.3	115.4	

^PPreliminary. ^rRevised.

Note: The fixed-weighted price index is a weighted average of the individual price index series used to deflate the Value of Construction Put in Place (VIP) series. In calculating the index, the weights (the composition of current dollar VIP in 1996 by category of construction) are held constant. Consequently, the index reflects only changes in prices. The implicit price deflator is a derived ratio of total current to constant dollar VIP (multiplied by 100). It is the average of the individual price indexes used in the deflation of VIP, but the prices are weighted by the composition of VIP each period. As a result, the implicit price deflator reflects not only changes in prices, but also changes in the composition of VIP, and its use as a measure of price change is discouraged.

Table 4. **Relative Standard Errors and Coefficients for Standard Errors of Changes**

Type of construction	Relative standard error (percent)			Coefficient for changes	
	Monthly estimate	Year-to-date estimate	Annual estimate	Month-to-month change (k1)	Year-to-date change (k2)
Total construction	2	1	1	.03	.02
Private construction	3	1	1	.04	.02
Residential buildings	5	2	2	.06	.03
New housing units	2	1	1	.01	.01
1 unit	2	2	2	.01	.01
2 units or more	4	3	3	.03	.03
Nonresidential buildings	2	1	1	.02	.01
Industrial	3	2	2	.04	.03
Office	4	2	2	.05	.03
Hotels, motels	7	6	5	.09	.08
Other commercial	5	3	2	.06	.04
Religious	9	6	5	.12	.09
Educational	7	5	5	.10	.07
Hospital and institutional	6	5	5	.07	.07
Miscellaneous buildings	7	4	4	.09	.06
Public construction	2	1	1	.03	.01
Housing and redevelopment	8	5	4	.11	.07
Industrial	(NA)	(NA)	(NA)	(NA)	(NA)
Educational	3	2	2	.04	.03
Hospital	6	4	4	.08	.06
Other public buildings	3	2	2	.04	.03
Highways and streets	4	2	2	.05	.03
Military facilities	(NA)	(NA)	(NA)	(NA)	(NA)
Conservation and development	4	2	2	.06	.03
Sewer systems	6	3	3	.08	.04
Water supply facilities	8	4	3	.11	.06
Miscellaneous public	8	4	4	.11	.06

NA Not available.

Note: All statistics are based upon 2000 data. The coefficient (k1) for the month-to-month change is applicable to change from the previous month and change from the same month a year ago.

The standard errors (SE) for month-to-month and year-to-date changes may be approximated by the following formula with the appropriate coefficient shown in Table 4:

$$SE(\text{change}) = (k1 \text{ or } k2) (100 + \% \text{ change shown in table}).$$

For example, Table 1 shows that private 'office' construction increased 3 percent from last month. The standard error of the 3 percent increase is about equal to 5 percentage points:

$$SE(3\% \text{ increase}) = (.05)(100+3) = (.05)(103) = 5\%$$

Once the standard error is available, one can construct a 90 percent confidence interval of the change by multiplying the standard error by 1.6. In the above example, an approximate 90 percent confidence interval of the 3 percent increase for private 'office' construction would be between:

$$11 \text{ and } -5 \text{ percent } (3\% \text{ plus or minus } 8\% (5\% \times 1.6)).$$